DOCUMENT RESUME

ED 100 080 EC 070 554

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TITLE Special Education Curriculum Development Project for the United States Dependent Schools; European Area. Final Report.
INSTITUTION Michigan Univ., Ann Arbor. Inst. for the Study of Mental Retardation.
SPONS AGENCY Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.; Department of Defense, Washington, D.C.
REPORT NO 321711-FR
PUB DATE 73
GRANT OEG-0-71-1672(603)
NOTE 30p.; For the teaching guides see EC 070 552 and 553

EDRS PRICE MF-$0.75 HC-$1.85 PLUS POSTAGE
DESCRIPTORS *Curriculum Development; Elementary Education; Exceptional Child Education; *Learning Disabilities; *Mentally Handicapped; *Military Personnel; Secondary Education; *Teaching Guides
IDENTIFIERS *United States Dependent Schools European Area

ABSTRACT

Presented is the final report of a 2-year (1971-73) project by the Institute for the Study of Mental Retardation and Related Disabilities (ISMRRD) in which a guide was developed for teaching approximately 1,600 mentally retarded and learning disabled students (3 to 21 years old) in the United States Dependent Schools in the European Area (USDESEA). Included in the introduction are findings of a feasibility study which led to the project, the seven tasks (such as relating the curriculum content to the military environment) involved in meeting the project goal, background information on the target population in USDESEA schools, a list of curricular materials adapted for use in the project, and information on the project location and staff. Outlined in the second section are functions of USDESEA and ISMRRD staff members in developing the teaching guide, steps in personnel training (such as courses and workshops), and a chronicle of curriculum development. In the final section the instructional design of the teaching guide is described in terms of the following features: behaviorally stated abilities and assessments, content-development activities, a task analysis approach, and reinforcement activities. Also included are samples from the teaching guide, an outline of its contents, and recommendations for field testing and extension of its use to the Pacific theater. (LS)

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FINAL REPORT

Project No. 321711
Grant No. OEG-0-71-1672 (603)

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SPECIAL EDUCATION CURRICULUM DEVELOPMENT PROJECT

FOR THE UNITED STATES DEPENDENT SCHOOLS--EUROPEAN AREA

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December, 1973

The project presented herein was performed pursuant to Grant No. OEG-0-71-1672 (603) from the Bureau for the Education for the Handicapped, U.S. Office of Education, Department of Health, Education, and Welfare, and by a grant to the BEH, USHEW for the University of Michigan from the U.S. Department of Defense. However, the opinions expressed herein do not necessarily reflect the position of the U.S. Office of Education nor the U.S. Department of Defense, and no official endorsement by either should be inferred except as may be directly expressed by their appropriate representatives.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Office of Education

Bureau of Education for the Handicapped

EC 070554

ABSTRACT

This Curriculum Project, conducted by the Institute for the Study of Mental Retardation and Related Disabilities over a two year period (1971-1973) had two major purposes: (1) to develop a teachers' guide for exceptional children and youth in the United States Dependent Schools in the European Area (USDESEA); and (2) to provide training and experience in developing curriculum for a specific setting for University students and key personnel in USDESEA.

The project population for whom the teachers' guide was developed included approximately 1600 students placed in either special classes for the mentally retarded or resource rooms for students with learning disabilities. These students were located in seven European Districts which cover a radius of nine million square miles. Sixty percent of the school population resided in Germany.

The conceptual plan of the guide utilizes developmental skill sequences and criterion-referenced assessment tools. Abilities are presented in behavioral terms in an order approximating increasingly complex maturational and cognitive demands upon the student. Arranged in this way, each ability is a part of a subset of skills needed to master a skill at a higher level of complexity. As a corollary, learning each new skill provides reinforcement experiences for previously learned skills. The assessment items simply ask whether the student can perform a specific skill under a given set of conditions.

The guide is also designed to assist the teacher in planning classroom activities directed toward skill attainment through the avenues of Content Development and Task Analysis. Many of the skill statements are followed later in the guide by suggested teaching activities. These activities represent a content breakdown of the abilities and illustrate how a skill can be reduced to a series of small steps. In the event that a content development activity does not lead to the desired performance, techniques of task analysis are presented to help determine the extent to which the student's information-processing deficiencies may be interacting with the cognitive dimension of the task.

The guide is divided into four parts: (1) introductory materials and Pre-Academic Skills; (2) Reading, Mathematics, and Science; (3) Personal-Social Skills, Experience Units and World of Work; and (4) Teaching Resources and Teaching Strategies, which are cross-referenced to the activities in other parts of the guide.

After the first year of implementation, evaluation, and modification, the guide materials would be made available for more general use in the United States Dependent Schools in the Pacific Theater and should be adapted for schools in the United States.

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USDESEA CURRICULUM PROJECT

Final Report

Draft

INTRODUCTION

The Institute for the Study of Mental Retardation and Related Disabilities, (ISMRRD), University of Michigan, in cooperation with the United States Dependent Schools in the European Area (USDESEA), has developed A Teachers' Guide for Exceptional Children and Youth of U.S. service personnel in the European Area.

Problem and Rationale

A feasibility study, conducted for USDESEA by the Project Director prior to the initiation of the project proposal, indicated a strong need for a special education curriculum structure which would relate to the environment of the Dependent Schools and which would articulate with curricula of the schools in the United States to which most of these students return.

Unlike school districts in the United States, American communities served by USDESEA are not political entities with their own governing and taxing authorities. All school funds are appropriated by the United States Congress and are channeled through the USDESEA Director who has complete allocation and accounting responsibilities. By law, the Director is responsible for all phases of every program in every USDESEA school. Since these programs for exceptional children within USDESEA are widely dispersed, it is common to find only one or two special education teachers in a school which serves all American dependent children within a radius of fifty miles or more.

In the United States, developing curriculum guides for exceptional children and youth is usually seen as a task for the city or county school district in which they are to be implemented. Curriculum instruments prepared at higher governmental levels are typically designed to specify objectives and strategies for their attainment, but the responsibility for filling in the myriad practical details is left to the local school systems.

The high degree of teacher and student mobility found in the Dependent Schools is not found in most schools in the United States. There is a rapid turn-over of teachers in USDESEA and recruitment procedures result in drawing teachers from a wide range of training and experiential backgrounds. The unusual student mobility is reflected by the fact that approximately 69% of the school population are either new to the schools each fall or transferred into the schools during the year.

The study further suggested that curriculum development responsibility is feasible only to a limited extent by personnel within USDESEA. The dispersion of programs and the mobility of the people make it imperative that consistency and continuity exist within and between the special education programs operated by the Dependent Schools.

Finally, the feasibility study indicated that because of personnel and organizational constraints within USDESEA, the scope of developing a curriculum guide was greater than could be accomplished without seriously infringing upon other responsibilities of the staff.

As a result of the apparent needs established by this initial study, a proposal was written and submitted to the United States Department of Education, Bureau of the Handicapped, for support of a project to develop a curriculum guide for teachers of special education in the United States Dependent Schools in the European Area. The project was approved and funded with partial support from the Department of Defense.

Purposes

Initially, the major purpose of this curriculum project was the development of curriculum materials for the educable mentally retarded in USDESEA. However, following conferences with administrators and teachers in USDESEA and University of Michigan students, and after field testing parts of the first draft materials, it was the consensus that the unique concepts and strategies present in this guide are appropriate and applicable to other groups of mildly handicapped students, especially students with learning disabilities. Therefore, the major purpose of this project was changed to include the development of curriculum materials and strategies that would relate to the unique learning problems of many exceptional children and youth while keeping the major curriculum emphasis on the educable mentally retarded. Achieving this purpose required completion of the following tasks:

1. To design a teachers' guide utilizing a developmental skill sequence and performance objectives.
2. To provide techniques and strategies to assist the teacher in assessing the performance of students and in developing activities directed toward skill attainment.
3. To provide skill attainment forms that will follow transfer students.
4. To relate the curriculum content to the military environment.
5. To articulate the curriculum content, in so far as possible, with curricula in the United States to which most of these students will return.
6. To provide training and practical experience to University students in adapting curriculum for specific purposes.
7. To provide in-service training and practical experience to key USDESEA administrative and teaching peronnel in developing and evaluating the curriculum content of the guide.

Background

During the first phase of the project, the Institute project staff received orientation in the European Theater regarding extant special education programs. Special education centers were visited to obtain first-hand knowledge and understanding of the organization of classes and the teaching situation pertaining to the development of a specialized curriculum.

It was found that 810 students from seven districts in Europe were enrolled in special classes for the mentally retarded and approximately the same number of learning disability students were receiving special services in resource rooms. The number of students enrolled in special classes for the educable mentally retarded average 12 per class at the preschool, primary and intermediate levels and 10 per class at the secondary level. Teacher aides were provided for each special class. Many of the teachers used basal texts developed for the regular grades while others used teacher prepared materials, basal texts and audio-visual aids as the primary basis for instruction. There was no evidence of any curriculum structure being followed in the 30 classrooms visited by the project staff in Germany and Spain.

Each teacher and several administrative staff personnel were interviewed immediately following the visitations to determine curriculum needs as viewed by personnel and to elicit recommendations for curriculum content. There appeared to be general concurrence of the group on the needs and recommendations which follow:

1. A curriculum structure which follows a developmental sequence in each performance area.
2. Techniques that provide a means of assessing the present performance of a student in the academic and social areas and evaluation procedures to determine when a student has attained the skill.

3. A break-down of activities to develop skills.
4. Diagnostic procedures to aid teachers in determining the task demands made upon a student and to prescribe appropriate techniques and materials related to the learning task.
5. Instructional materials that relate to the academic and social areas, cross-referenced to specific activities.
6. Experience units and lesson plans that integrate various strands of the curriculum content.

Following the orientation period in Europe, the Institute staff and University students reviewed the literature, including 100 guides from large and small school systems and state administrative units in the United States. The staff assumed that the curriculum needs of a USDESEA could be met by synthesizing the best from current guides.

Careful examination of current guides for exceptional children, however, indicated that the majority of them are reflections of each other and watered-down versions of regular school curricula--designs which have borrowed bits and pieces from regular school curricula but have ignored the developmental sequences inherent in them. References to achievement levels, grade placements, and levels of expectancy appropriate to normal children were noted time after time in many guides used in special education programs throughout the United States. For example, standard reading and arithmetic series intended for normal children of a given chronological age level or grade placement are recommended for use with students of much older chronological age levels who are assumed to be of comparable mental age levels.

In addition, curriculum guides are often keyed to the handicapping condition on the apparent assumption that similarity in underlying disease process produces similarity in learning related symptoms. This practice of labeling curricula tends to limit the use of these guides unnecessarily.

Some of the curricula and other materials reviewed contained excellent resources that were adopted or modifed to adjust to the format of this guide. Permission was granted by the following authors, publishers and governmental institutions to use or adapt selected curricular materials:

Cawley, J., Multiple Option Mathematics Curriculum for the Mentally Retarded, University of Connecticut. (These materials are being reproduced for use in USDESEA.)

Cratty, B., Developmental Sequences of Perceptual Motor Tasks, Educational Activities, Inc., Freeport, New York.

Cruickshank, W., Marshall, E., and Hurley, M., Foundations of Mathematics, Teaching Resources, Boston, Massachusetts.

Cheeves, R., Visual-Motor Teaching Materials, Teaching Resources,

Life Sciences: A Special Education Program, ME NOW, Biological Sciences Curriculum Study, P.O. Box 930, Boulder, Colorado, Publisher: Hubbard Scientific Company, Northbrook, Illinois.

Goldstein, H., Social Learning Curriculum, Yeshiva University, New York, New York.

Special Education Curriculum Development Center--An In-service Training Approach: Life Experience Starter Unit, Meyen, E., Director. A Cooperative Program Involving the Iowa State Department of Education and the University of Iowa.

To overcome the deficiencies in many existing curricula the authors of this guide created a design which includes a developmental sequence of abilities, assessment techniques, content development activities, reinforcement activities, and task analysis. These concepts are developed more specifically elsewhere in this report and in the teachers' guide.

Project Location and Staff

The major portions of this Teachers' Guide for Exceptional Children were developed by the staff at the Institute for the Study of Mental Retardation and Related Disabilities, University of Michigan. The staff worked closely with teachers and administrators in USDESEA to secure maximal input and feedback in the development and the evaluation of some of the materials.

The project staff consisted of the following personnel:

William M. Cruickshank: Project Director

Rozelle J. Miller: Principal Investigator and Training Program Associate

Ronald E. Nutter: Training Program Associate

John B. Junkala: Training Program Associate (stationed in Europe)

Lynn F. Ellis: Research Assistant

Other personnel directly related to the project for shorter periods of time included Barbara Sinelli, Program Associate, and Marjorie Barnes, Consultant in Science and Mathematics.

Students from the University of Michigan and Eastern Michigan University received training and experience in developing curriculum materials related to the guide's purposes.

Individuals from the Institute, other University of Michigan staff and public school staff served from time to time as consultants to the project staff.

Teachers and administrators in USDESEA performed a particularly helpful service in field testing, critiquing materials, and developing units and lessons for the guide.

METHODS AND PROCEDURES

The project population for whom the teachers' guide was developed included approximately 1600 students placed either in special classes for the mentally retarded or in resource rooms for students with learning disabilities. The chronological age range extended from three to twenty-one. These students were located in seven European districts which cover an area of nine million square miles. Sixty percent of the school population resided in Germany.

Staff Function

Four groups of educators were directly involved in the development of the teachers' guide: (1) USDESEA Directorate and District Staff; (2) local teachers and staff; (3) staff from the Institute for the Study of Mental Retardation and Related Disabilities (ISMRRD), University of Michigan; and (4) students from the University of Michigan and Eastern Michigan University.

These four groups functioned in the following manner:

(1) USDESEA and District Staff provided professional consultation in curriculum and pupil personnel services and provided logistical support to all phases of the project.

(2) Local teachers and staff served in an advisory capacity in specifying curriculum needs and in describing the military community resources; critiqued first drafts of the materials; field tested sections of the guide; and contributed instructional sequences, unit materials and lesson plans for inclusion in the guide.

(3) ISMRRD staff determined the curriculum needs in USDESEA, based on a continual input and feedback from teachers; established a conceptual base for the development of A Teachers' Guide for Exceptional Children and Youth and provided in-service training necessary for adoption and implementation of the guide; prepared drafts for critiquing and field-testing by USDESEA personnel; and revised and produced the final copy of the guide.

(4) University students developed assigned portions of curriculum materials under the supervision and direction of the ISMRRD staff.

For purposes of providing a liaison between USDESEA and the University of Michigan, a resident coordinator from ISMRRD was stationed at the USDESEA Directorate. The role of the resident coordinator was to elicit input and feedback from USDESEA personnel; to advise the ISMRRD staff on educational problems unique to USDESEA schools; and to provide consultation and in-service training in field-testing and implementation of the guide.

Personnel Training: University of Michigan (ISMRRD)

University of Michigan and Eastern Michigan University students received long-term and short-term training and experience in developing curriculum materials for the teachers' guide. Twelve students received course credit for their participation. They were assigned to the project for one-half day a week during the fall and winter terms. A minimum of four individual conferences and five small group meetings were held with the students. The course content included:

1. Orientation to the curriculum design by project staff.
2. Review of the literature with reference to current curriculum materials.
3. Review of the literature to become familiar with the theoretical aspects of a developmental curriculum and task analysis.
4. Development of a series of instructional sequences related to various aspects of the curriculum design.
5. Participation in staff seminars to critique guide materials.

Students enrolled in other special education courses at the University of Michigan were assigned to the project for shorter periods of time to receive orientation to the curriculum design. The project staff members were also invited to speak to various class groups of university students and teachers in public school systems from time to time.

Personnel Training: USDESEA

In-service meetings for special education teachers were conducted by the liaison coordinator in Germany, England and Spain during the first year and a half of the project. The program content included:

1. Orientation to the project's curriculum design.
2. Instruction in task analysis techniques.
3. Instruction in developing skill sequences.
4. Review of materials and techniques utilized in developing units and lesson plans.
5. Development of units and lesson plans.

Workshops

All of the special education programs in the European area were represented in the two-week workshops conducted during each of the two successive summers.

The 1972 workshop was operated under the aegis of the University of Oregon with Institute personnel serving as faculty members. Twenty-six teachers and four administrators were enrolled. The two-week agenda included:

Introduction to First Draft Materials

Rationale for Design

Content-Development

Task Analysis

Teaching Strategies

Materials and Resources

Demonstrations of various teaching strategies, e.g. a T.V. tape on task analysis, and role playing simulations and learning centers.

Critiques of sections of the guide by small groups, followd by amalgamation of revisions.

Presentations by workshop participants, e.g. Work Study Programs, Behavior Management, Effective Use of Teacher Aides and Minority Studies.

The 1973 Workshop was also operated under the aegis of the University of Oregon with Institute staff serving as faculty members. Thirty teachers and fifteen administrators attended including district coordinators, principals and counselors. Three selected teachers, who had participated in the 1972 workshop, served as teacher instructors.

The 1973 workshop schedule included:

Lectures each morning on Current Issues in Special Education by the Director of the project.

Panel discussions on the various sections of the guide.

Viewing and discussing a Kinescope on Individualized Instruction on Task Analysis developed by the liaison coordinator of the project.

Small group discussions with workshop staff.

Presentations by USDESEA staff on Minority Studies and Drug Education.

Presentations and demonstrations of teaching strategies, e.g. role playing simulations, and unit teaching by participants.

The following chart indicates the time frame of the project beginning in September 1, 1971, and terminating on August 31, 1973.

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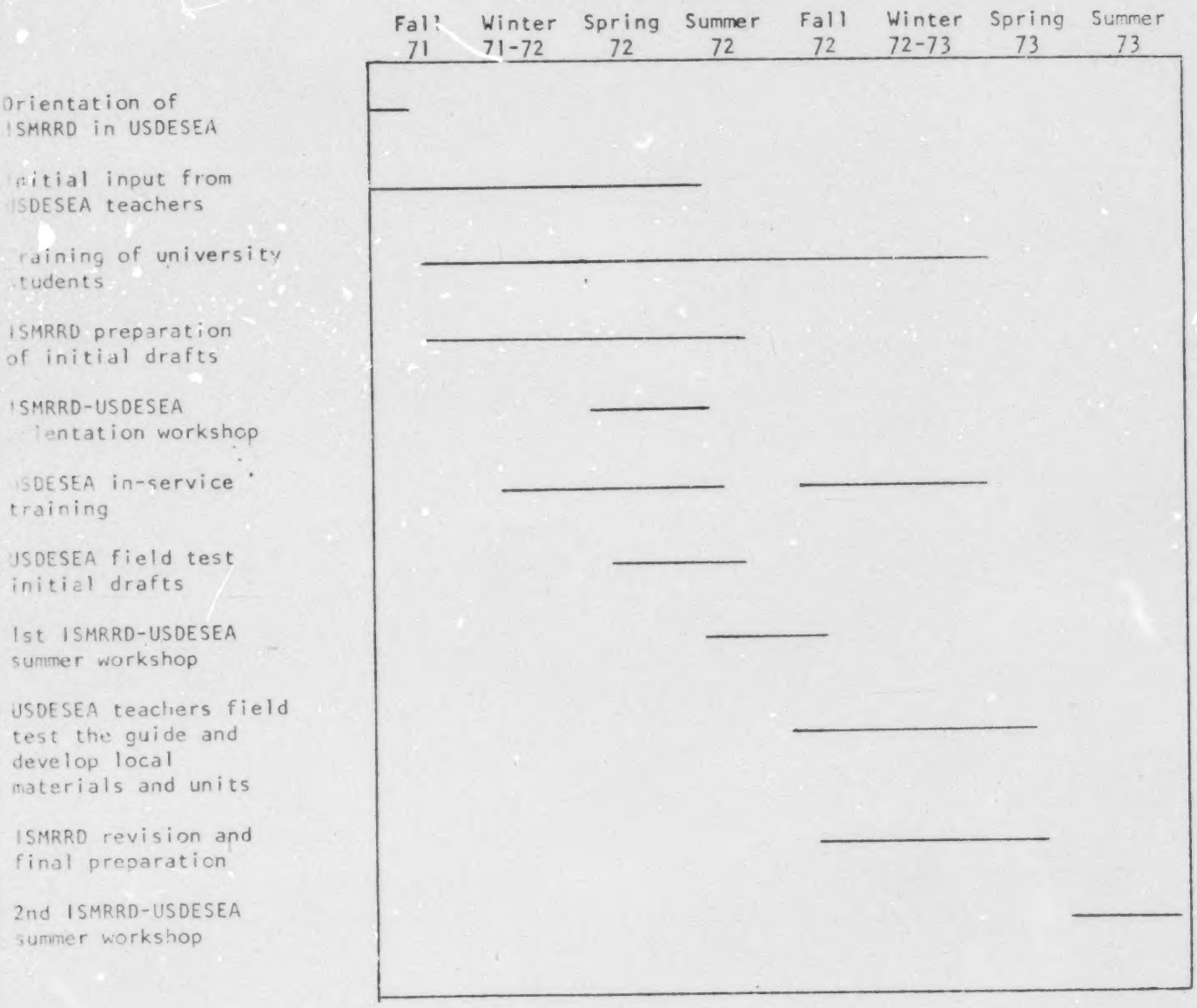
Chronicle of Curriculum Development



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Instructional Design

Abilities and Assessments

As alternatives to grade-level referents and norm-reference achievement scores, the instructional design follows a developmental ability sequence and criterion referenced assessment tools. A developmental ability sequence is a list of skills comprising a given performance area in which the skills are presented in an order approximating their increasingly complex maturational and cognitive demands upon the student. As a corollary, the work involved in learning each new skill provides the student with reinforcement experiences for previously learned skills. A criterion-referenced assessment item simply asks whether the student can perform a specific skill or set of skills under a given set of conditions. Items which assess student achievement or performance in terms of established criteria thus provide information about the individual's competence in attaining a skill which is independent of reference to the performance of others. In effect, each ability statement with its assessment activity in this guide is a set of assessment criteria.

The ability statements, which follow a developmental sequence, become a part of a subset of skills needed to master a skill at a higher level. After each ability statement in the Abilities and Assessments and Suggested Teaching Activities format there is an assessment activity. The assessment activity enables the teacher to make better decisions in grouping students as well as in teaching individuals. If the student can successfully perform the task, he can proceed to the next ability in the sequence. If he cannot perform the task, the teacher plans activities directed toward skill attainment through content development and task analysis. Following the content development and reinforcement activities the assessment activity is repeated.

Content-Development

The Suggested Teaching Activities are illustrative of some of the content activities that may be utilized. They represent a breakdown of the skills and indicate how a skill may be presented in a series of smaller steps.

There are two categories of teacher action in each set of content development activities: what the teacher does is indicated by lower-case letters, and what she says is indicated by upper-case letters. Directions given by the teacher are intended to be clear, concise, and stated in simple student-related vocabulary. Time allotments for each set of activities are purposely not specified. Teachers can make decisions about the best pace of instruction to use with groups and individuals. Some students may be able to master a skill in one period of instruction, while others may need several periods.

The appropriate activity sequence for each student can be determined after a careful examination of each small step involved in the attainment of the ability. Once this determination is made, activities may be developed utilizing the Suggested Teaching Activities as examples.

Reinforcement Activities

Following the Content-Development activities is a list of reinforcement activities. This list is intended to represent ideas or suggestions for reviewing the ability after it has been attained or as additional practice for the student who has essentially attained the skill but does not consistently exhibit the desired behavior.

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Task Analysis

In the event that a content-development activity does not lead to the desired performance, the teacher is presented with the techniques of task analysis to help determine the extent to which the student's information-processing deficiencies may be interacting with the cognitive components of the task.

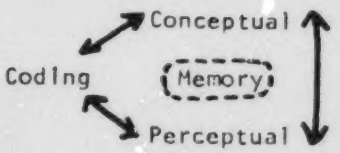
The abilities in the guide's developmental sequence are stated in behavioral terms to help the teacher to know what to look for in a successful pupil performance. Knowing how to apply task analysis techniques provides additional assistance in identifying the demands a task will make on a student and thus helps the teacher to prepare the child to meet each demand.

Task analysis exists in three dimensions: process demands, cognitive demands, and affective demands. This guide emphasizes the first two. Processing specifies how the student is to receive information about a task (input) and how he is to transmit information in the form of a response to a task (output). Cognition refers to the internal mediation to be performed by the student between the time he receives the input and generates the output. The following figure illustrates the relationship between these two dimensions.

INPUT

	Verbal	Nonverbal
Auditory		
Visual		
Tactual		
Kinesthetic		

COGNITION



OUTPUT

	Verbal	Nonverbal
Vocal		
Motor		

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The Processing Dimension.

INPUT is described in terms of the sensory modalities that must receive and organize the stimuli from the directions and materials, and in terms of the verbal or nonverbal nature of the various incoming stimulus sets. In general, it can be described with the following matrix.

	Verbal	Nonverbal
Auditory		
Visual		
Tactual		
Kinesthetic		

Once in a while a task has an olfactory or gustatory input component, and although they are not listed on the left side of the matrix, it can be assumed they are there if needed. The rows of the matrix describe the incoming sensory pathways for the content of the task. The two columns simply indicate what parts, if any, of the incoming information contain letters or words.

There is an auditory, verbal component to almost every task (pantomime is a notable exception). To avoid getting bogged down by this fact when looking at the input demands of a task, an analysis can begin at the point where the child understands what it is he is supposed to do. For example, in a visual discrimination task where the child is given a line of geometeric shapes on a paper with the instruction, "See this one? Now, look over here and find one just like it and make a line under it," the input would be described as visual, nonverbal. Obviously, the teachers directions were auditory, verbal, but this factor would be ignored in the initial analysis to concentrate on the actual content of the activity.

The OUTPUT demands of a task can be described within the following matrix:

	Verbal	Nonverbal
Vocal		
Motor		

On a visual discrimination task the child is asked to find and mark a geometric form like the one the teacher points to; the output would be described as motor nonverbal. At the same time that one looks at the input components of the tasks failed by the student, one would also look at the output components for trends. It is quite possible that the student is getting the input in fine shape and that his problem occurs after he understands the incoming information. An example of this is the child who can't say that Frankfurt is at approximately 50 degrees north latitude, but can point to it on the map and indicate the appropriate parallel, or can write the appropriate answer. His problem is probably one of ideating the motor plan needed to say what he wants to say. Some examples of the input-output dimension of task analysis are:

(1) The teacher tells the student to copy the new spelling words from the board:

Input: Visual, verbal (the words the student sees on the board)

Output: Motor, verbal (writing the words)

(2) The teacher gives the student a paper-and-pencil spelling test.

Input: Auditory, verbal (the words the student must hear)

Output: Motor, verbal (writing the words)

(3) The teacher gives the student an oral spelling test.

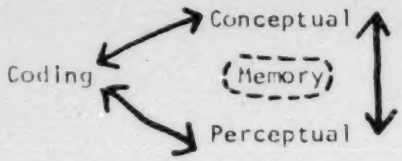
Input: Auditory, verbal (the words he must hear)

Output: Vocal, verbal (spelling the words aloud)

The Cognitive Dimension

The following figure is a schematic representation of the relationship between the perceptual, coding, and conceptual demands of the cognitive dimension. Adequate coding presumes adequate perceptual functioning. Conceptual functioning subsumes both coding and perceptual functioning, although not every conceptual task need include a coding component.

Schematic Representation of the Cognitive Dimension:



(1) Perceptual Level: At the perceptual level the task demands require the child to select stimuli from a stimulus array, then integrate and structure the stimuli so that they can be identified accurately. Identification implies that children are aware of functions, characteristics or meanings. Identifying a picture as a church is an example of functioning at the perceptual level. Identifying "b" as the letter "b" is a perceptual event. Pointing to a box on a table full of objects after hearing the word "box" is a perceptual event.

The look-say (or sight) approach to reading is largely perceptual in its demands, at least in its early phases. Children learn to read whole words by their total configurational patterns. The word "said," for example, is just that--nothing more, nothing less. It is not a collection of sound symbols that equals the word. It is just "said."

(2) Coding Level: At this level of cognitive functioning, the child is beginning to abstract the properties of objects and events. He is not dealing with things solely as they appear in concrete form (a church, or the letter "b"); rather, he is dealing with the letters that will graphically record the sounds of their names. As soon as the child looks at "b" and says "buh" or "b as in baby," or as soon as he hears "book," and knows that it begins with "b," he is functioning at a coding level. Letters and sounds, or letters and objects, must be associated with each other.

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(3) Conceptual Level: At this level, task demands are concerned with the development of meaningful relationships. Of course there is meaning at the perceptual level because a picture of a thing means that thing itself, and at the coding level because a letter stands for a sound. At the conceptual level, however, the task requires the child to relate--that is, to classify objects or events, to draw inferences from them, or to make statements about their value.

Memory

Every task has a memory component which may vary from relatively easy to extremely difficult.

(1) Awareness. The act of forming a percept often involves comparing a model to an array of items in order to find one just like the model. For example, in a visual discrimination task the teacher says, "See this? Now find one just like it over here." Where the model remains present, the child must be able to "hold" the characteristics of the model long enough to "find one just like it." The nature of the task allows him to glance back at the model as often as he may desire. The memory demand is relatively easy, but it is memory; this type of awareness is what allows him to form his discrimination.

(2) Recognition. If the visual task just described were changed to one in which the teacher shows the model, removes it and then says, "Find one like it here," she can increase the memory loading to a degree considerably more difficult than before. Unable now to compare each object visually with the model, the child must be able to recognize the correct one among an array of distractors based on his memory of what the model looked like. At the university level, many of us have experienced this type of memory demand in the form of multiple-choice examination questions.

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(3) Recall. The heaviest memory demand is one in which the child is given no concrete clues whatsoever. E.g., "Draw a diamond on your paper." "Spell disable." "What were the names of Napoleon's marshals at Waterloo?"

Teacher Tips: Teaching Resources and Teaching Strategies.

References to Teacher Tips, Part IV of the guide, are indicated by page numbers, item numbers, and letters under the two columns on the right side of each ability and assessment and suggested teaching activities page. The columns are titled Teaching Resources and Teaching Strategies. The teaching resources include supplementary materials and supplies that are available to the teacher. The teaching strategies provide the teacher with additional techniques and methods such as role-playing, educational games, and simulations.

The following pages from the Pre-academic section, Part I, and the World of Work section, Part III of the guide are examples of the application of the design utilized in the development of the curriculum.

AUDITORY SKILLS

Ability and Assessment:

4. To distinguish between levels of sound intensity.

Raise and lower the volume of a radio

CLOSE YOUR EYES.

WHEN THE MUSIC GETS LOUD, RAISE YOUR HAND. WHEN IT GETS SOFT, LOWER YOUR HAND.

Content-Development Activities:

(1) Play music on a record or tape. Vary the volume from loud to soft. Tell the pupils to march around the room, rapidly when the music is very loud, and slowly on tip-toe when the music is very soft. (Be certain that they are responding to the auditory cues of the music, rather than the visual cues of other children.)

(2) Assemble a group of sound-producing objects such as a drum, a small bead in a glass jar, a large hand bell, a feather, etc.

MAKE A SOUND WITH EACH OF THESE AND THEN PUT THE ONES THAT MAKE LOUD NOISES IN ONE GROUP, AND PUT THE ONES THAT MAKE SOFT NOISES OVER HERE.

Task Analysis*

Process		Cognition
In:	visual nonverbal	conceptual
	auditory nonverbal	awareness
Out:	motor nonverbal	

(3) Assemble pictures of sound-producing objects, such as a tiny bell, a jet plane, bowling pins being knocked over, etc.

PUT THE PICTURES OF THINGS THAT MAKE LOUD SOUNDS IN ONE PILE, AND THE PICTURES OF THINGS THAT MAKE SOFT SOUNDS IN ANOTHER PILE.

Task Analysis

Process		Cognition
In:	visual nonverbal	conceptual
Out:	motor nonverbal	recall

(4) Assemble three pictures of objects that make low, medium, and high intensity sounds, such as a bicycle, a car, and a jet plane. Define and give examples of softest, louder, and loudest.

(5) Play a tape of a truck approaching from a long distance, passing the listener and receding into the distance.

CLOSE YOUR EYES.

WHEN THE TRUCK GETS LOUDER, RAISE YOUR HAND AND KEEP IT UP UNTIL IT STARTS TO GET SOFTER.

Reinforcement Activities

(1) Give each pupil a picture of a loudspeaker and a picture of a person whispering in someone's ear. Play a tape recording of sounds at various intensity levels.

WHEN YOU HEAR A LOUD SOUND, HOLD UP THIS PICTURE (the loudspeaker).
WHEN YOU HEAR A SOFT SOUND, HOLD UP THIS PICTURE (whispering).

(2) Make two wall charts, one titled "Loud Sounds Around Us," the other titled "Quiet Sounds Around Us." Each day assist the pupils in making picture entries on either of the charts.

WHAT LOUD (QUIET) SOUND(S) DID YOU HEAR TODAY?

World of Work

Level I

Ability and Assessment

1. To follow simple spoken directions.

   Get the pupil's attention. Give one direction at a time.

   PICK UP THE HAMMER. . .TOUCH THE WASTEBASKET. . .GO TO THE CHALKBOARD. . .
   PICK UP THIS PAPER. . .etc.

   Content-Development Activities:

   (1) Cut out paper "listening ears." Each pupil gets a pair.

   PUT ON YOUR LISTENING EARS. LISTEN CAREFULLY. DO WHAT I TELL YOU.

   STAND UP . . .
   HOLD UP YOUR HANDS . . .
   JUMP TWICE . . .
   WAVE YOUR HAND . . .

   Task Analysis

Process	Cognition
In: auditory verbal	perceptual
Out: motor nonverbal	awareness

   (2) Play the "Hokie Pokie" or "Simon Says."

   WE WILL PLAY A GAME THAT TELLS US WHAT TO DO. TOM, YOU MAY BE THE FIRST LEADER.

   (3) Use hand puppets to give simple directions. Have pupils use the hand puppets to give simple directions.

   (4) Choose appropriate content-development activities in the Auditory Skills section of Part I of the guide.

   Reinforcement Activities

   (1) Specify part of each day as Listening Time. Repeat and review simple directions of the type found in content-development activity (1) above.

   (2) Have pupils give simple directions to other pupils.

   (3) Pantomime directions and have pupils guess and/or follow the directions.

RESULTS

The results of the project are contained in A Teachers' Guide for Exceptional Children and Youth which accompanies this Final Report. The outline which follows constitutes the contents of the guide:

Part I

Forward
Preface
Acknowledgements
Introduction to the Organization and Use of the Guide
Steps for Using the Guide
Task Analysis
Pre-Academic Skills:
- Introduction
- Abilities and Assessments
- Suggested Teaching Activities

Language Development:
- Introduction
- Abilities and Assessments
- Suggested Teaching Activities

Ability Attainment Form
Selected Annotated Bibliography

Part II

Reading:
- Introduction
- Abilities and Assessments
- Suggested Teaching Activities

Handwriting and Spelling:
- Introduction
- Abilities and Assessments
- Suggested Teaching Activities

Mathematics:
- Introduction
- Abilities and Assessments
- Suggested Teaching Activities

Science:
- Introduction
- Abilities and Assessments
- Suggested Teaching Activities

Part III

Personal-Social Development
- Introduction
- Abilities and Assessments
- Suggested Teaching Activities

The Experience Unit:
- Introduction
- Developmental Steps for Writing Experience Units

Units--
Ways We Move
Safety
Orientation to the world of work
Sub-Units--Lessons
Cooking
Pets
Living in our American Village
Use and Abuse of Drugs

The World of Work:
Introduction
A Curriculum Model for Senior High School Special Education Programs in USDESEA by Mahlon E. Porter
Abilities and Assessments
Suggested Teaching Activities
APPENDIX A: Job Training Centers and Areas of Skill Training
APPENDIX B: Sample Forms
References

Part IV

Introduction
Teaching Resources:
Reading
Handwriting and Spelling
Mathematics
Science
Personal-Social Development
Orientation to the World of Work
Teaching Strategies:
How to Utilize Instructional Materials and Equipment
Teacher Aides
Developing Experience Charts
Learning Centers
Educational Games
Role-Playing
Simulations
Modifying Behavior

A developmental education design is presented which relates to the unique learning problems of exceptional children and youth. Certain fundamental concepts have been pursued in depth to serve as examples of the approach which the writers feel should be taken in all areas of the students' education. The guide does not present a curriculum program which is complete in every detail. Creative teachers provided with guidelines can employ their own initiative and ingenuity in executing many aspects of the curriculum. The teacher who becomes familiar with the concepts of developmental sequences and task analysis techniques and who follows carefully the suggested teaching activities provided in many parts

of the guide should discover that a stimulating educational experience can be accomplished effectively.

RECOMMENDATIONS

On the basis of the success of field testing curriculum materials developed during the early phase of the Project and responses received from USDESEA personnel, it is recommended that:

--- USDESEA personnel select key teachers and administrative personnel to field test all parts of the guide for a period of not less than one year.

--- Evaluative procedures be developed to determine the effectiveness of the guide.

--- Modifications and revisions be made following the evaluation of guide materials.

--- The guide materials be extended to United States dependent schools in the Pacific theater.

--- The curriculum guide be made available for more general use and adaptation after field testing and modification.